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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,546	12/02/2004	Han Leng Paxton Tan	SG 020011	5711
24737	7590	08/28/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			HU, RUI MENG	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/516,546	Applicant(s) TAN, HAN LENG PAXTON	
	Examiner RuiMeng Hu	Art Unit 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/02/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/25/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 7/25/2005 has been considered by the examiner and made of record in the application file.

Specification

4. The disclosure is objected to because of the following informalities:
 - a) On **page 2 line 7**, replace "10,7" with --10.7--.
 - b) On **page 3 line 7**, replace "87,5" with --87.5--, "108,5" with --108.5--.
 - c) On **page 3 line 8**, replace "98,2" with --98.2--, "119,2" with --119.2--.
 - d) In the sole figure, block "2" is not mentioned in the specification.

Claim Objections

5. Claim 1 is objected to because of the following informality:
 - a) In claim 1 line 2, replace "criteria" with --criteria--.
 - b) In claim 1 line 4, replace "nor" with --not--.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-2** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Consider **Claim 1**, the phrase “at least most” is an improper term in English language, and said phrase raises indefiniteness to the scope of claimed subject matter which applicant regards as the invention.

Consider **claim 2, as applied to claim 1**, because claim 1 fails to meet the second paragraph of 35 U.S.C. 112 as stated above, and therefore claim 2 is rejected.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. **Claims 4-7** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 4 is a hybrid claim and it does not provide competitors with an accurate determination of the METES AND BOUNDS of protection involved so that an evaluation

of the possibility of infringement may be ascertained with a reasonable degree of certainty.

Consider **claim 5, as applied to claim 1 or 2**, algorithm for processing FM signals in an auto-tuning device, said algorithm is not limited to physical devices, could be determined as software and reasonably include energy waveforms such as electromagnetic wave which do not fall under statutory subject matter.

Consider **claim 6, as applied to claim 3**, computer program capable of running on signal processing means in a radio FM receiver or cooperating with a radio FM receiver comprising the auto tuning device, said computer program is not limited to physical devices and could reasonably include energy waveforms such as electromagnetic wave which do not fall under statutory subject matter. Also the specification fails to disclose the procedure and use of said computer program, one with ordinary skill in the art would not recognize the utility of said computer program as it fails to produce tangible results. Therefore claim 6 as applied to claim 3 is rejected under 35 U.S.C. 101.

Consider **Claim 7, as applied to claim 1 or 2**, information carrier carrying instructions, said information carrier is not limited to physical devices and could reasonably include energy waveforms such as electromagnetic wave which do not fall under statutory subject matter.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. **Claims 1-2 and 4-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kennedy et al. (European Patent Application Publication # 0430469)** in view of **Daughtry, Jr. et al. (U.S. Patent # 5940748)** further in view of **Tomita (U.S. Patent # 5937338)**.

Consider **claim 1**, Kennedy et al. clearly disclose method of auto-tuning a radio FM-receiver by scanning the receiver frequency band until a FM signal is received (column 1 lines 11-15) meeting criteria (Figure 3, level detector means 32, automatic frequency control (AFC) window detector means 33, peak or noise detector means 31) for identifying the signal as being of a predetermined quality (column 2 lines 2-5), particularly coming from a valid FM station, characterized in that at least during tuning it

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is permanently established whether or not the FM signal meets the criteria (column 6 lines 6-16) (Abstract, column 1 lines 20-34, column 4 line 33-column 5 line 7, Figures 1-4).

However Kennedy et al. fail to disclose the results thereof are read a predetermined number of times, and the FM signal is only stored if at least one-half of the times the criteria are met.

In the same field of endeavor, Daughtry, Jr. et al. clearly disclose a method and a system for determining the integrity of a received signal (to avoid accepting an interfering signal or noise) by measure signal strength and measure signal frequency a predetermined number of times, and such signal is accepted for further process if at least one-half of the times the condition is met (Abstract, column 10 lines 1-20, figure 3A).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Daughtry, Jr. et al. into the signal quality detecting circuit for FM receivers of Kennedy et al. as to determine a received signal is surely a desired signal from a valid transmitter and to avoid of accepting an interfering signal or noise or any unwanted signals, by measuring such received signal multiple times and such signal is accepted if most of the times the conditions are met.

However Daughtry, Jr. et al. fail to mention of storing a signal.

In the same field of endeavor, Tomita clearly discloses a scanning radio receiver includes a programmable memory to store frequencies received by the scanning radio receiver (Abstract).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Tomita into the signal quality detecting circuit for FM receivers of Kennedy et al. as modified by Daughtry, Jr. et al. as to store all desired FM radio frequencies for quickly and conveniently receiving broadcasts from stored FM radio stations in future.

Consider **claim 2, as applied to claim 1 above**, Kennedy et al. as modified by Daughtry, Jr. et al. and Tomita, fail to disclose that the results are read 10 times and the FM signal is only stored if at least 8 times thereof the criteria are met.

In the same field of endeavor, Daughtry, Jr. et al. clearly disclose such signal is read 10 times and such signal is accepted for further process if at least one-half of the times (at least 5 times) the condition is met (column 10 lines 1-20, figure 3A, the number of times that the signal meets the criteria is preferred to be over one-half of the total times taken in both situations of which disclosed in the application and the reference, a false determination over the received signal would not likely to occur if at least half of the times that the signal meets the criteria).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Daughtry, Jr. et al. into the signal quality detecting circuit for FM receivers of Kennedy et al. as to determine a received signal is surely a desired signal from a valid transmitter

and to avoid of accepting an interfering signal or noise or any unwanted signals, by measuring such received signal multiple times and such signal is accepted if most of the times the conditions are met.

However Daughtry, Jr. et al. fail to mention of storing a signal.

In the same field of endeavor, Tomita clearly discloses a scanning radio receiver includes a programmable memory to store frequencies received by the scanning radio receiver (Abstract).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Tomita into the signal quality detecting circuit for FM receivers of Kennedy et al. as modified by Daughtry, Jr. et al. as to store all desired FM radio frequencies for quickly and conveniently receiving broadcasts from stored FM radio stations in future.

Consider **claim 4, as applied to claims 3 and (1 or 2)**, Kennedy et al. as modified by Daughtry, Jr. et al. and Tomita clearly disclose Radio FM receiver for realizing the method, comprising an auto-tuning device (the title).

Consider **claim 5, as applied to claim 1 or 2 above**, Kennedy et al. as modified by Daughtry, Jr. et al. and Tomita fail to disclose an algorithm for processing FM signals in an auto tuning device.

In the same field of endeavor, Daughtry, Jr. et al. clearly disclose an algorithm (the program comprises steps) for processing signals in an auto-tuning device (Figure 1, controller 120) (column 9 lines 14-21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Daughtry, Jr. et al. into the signal quality detecting circuit for FM receivers of Kennedy et al. as modified by Daughtry, Jr. et al. and Tomita as to carry out each step or operation properly and orderly.

13. **Claims 3 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kennedy et al. (European Patent Application Publication # 0430469)** in view of **Daughtry, Jr. et al. (U.S. Patent # 5940748)**.

Consider **claim 3**, Kennedy et al. clearly disclose an auto tuning device (integrated circuits, column 1 lines 20-34) with means to register whether or not a FM signal, received in a radio FM receiver, meets criteria (Figure 3, level detector means 32, automatic frequency control (AFC) window detector means 33, peak or noise detector means 31) for identifying the signal as being of a predetermined quality (column 2 lines 2-5), particularly coming from a valid FM station (column 6 lines 6-16) (Abstract, column 4 line 33-column 5 line 7, Figures 1-4).

However, Kennedy et al. fail to disclose counting means to register in an interval of a predetermined number of times that is registered whether or not the FM signal meets the criteria, the number of times the FM signal meets the criteria.

In the same field of endeavor, Daughtry, Jr. et al. clearly disclose counting means (In Fig. 3A, 310, 315) to register in an interval of a predetermined number of times (10 readings) that is registered whether or not the signal meets the criteria, the number of times the signal meets the criteria (Abstract, column 10 lines 1-20, figure 3A).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Daughtry, Jr. et al. into the signal quality detecting circuit for FM receivers of Kennedy et al. as to determine a received signal is surely a desired signal from a valid transmitter and to avoid of accepting an interfering signal or noise or any unwanted signals, by measuring such received signal multiple times and such signal is accepted if most of the times the conditions are met.

Consider **claim 6, as applied to claim 3 above**, Kennedy et al. as modified by Daughtry, Jr. et al. fail to disclose a computer program capable of running on signal processing means in a radio FM receiver or cooperating with a radio FM receiver comprising the auto tuning device.

In the same field of endeavor, Daughtry, Jr. et al. clearly disclose a program capable of running on signal processing means in a receiver or cooperating with a receiver comprising the auto tuning device (Figure 1, controller 120) (column 9 lines 14-21).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Daughtry, Jr. et al. into the signal quality detecting circuit for FM receivers of Kennedy et al. as modified by Daughtry, Jr. et al. as to control the components logically in a circuit and to perform various operations orderly.

14. **Claim 7** is are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kennedy et al. (European Patent Application Publication # 0430469)** in view of

Daughtry, Jr. et al. (U.S. Patent # 5940748) further in view of **Tomita (U.S. Patent # 5937338)** and **Davis et al. (U.S. Patent # 4839628)**.

Consider **claim 7, as applied to claim 1 or 2 above**, Kennedy et al. as modified by Daughtry, Jr. et al. and Tomita, fail to disclose an information carrier, carrying instructions to be executed by signal processing means, the instructions being such as to enable said processing means to perform the method.

In the same field of endeavor, Davis et al. clearly disclose an information carrier, carrying instructions to be executed by signal processing means, the instructions being such as to enable said processing means to perform the method (column 5 lines 48-53).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Davis et al. into the signal quality detecting circuit for FM receivers of Kennedy et al. as modified by Daughtry, Jr. et al. and Tomita, as to carry out signal processing steps properly and orderly.

Conclusion

15. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed**

to: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314


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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RuiMeng Hu
R.H./rh
August 16, 2006


RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER
8/12/06